

V. INVOLVEMENT IN THE GOVERNMENT-WIDE GRANTS EFFORT

Agency-Specific Report to Congress Under Public Law 106-107

NATIONAL SCIENCE FOUNDATION (NSF)

A. Participation in the Government-wide Streamlining and Grants.gov Efforts

NSF remains an active and engaged partner in Public Law 106-107-related Federal-wide efforts. NSF's commitment to this partnership is demonstrated by the large number of leadership roles that have been assumed by NSF staff in many Federal-wide groups as well as the participation of several staff members in interagency work groups responsible for streamlining the Federal grant process. A summary of these efforts follows.

Pre Award Working Group

NSF staff has continued to remain heavily involved in the Pre Award Working Group efforts during this annual reporting cycle. NSF believes that the streamlining and standardization activities subsumed under the Pre Award Working Group are of vital importance to the Foundation and its customer groups, given NSF's strong reliance on use of assistance awards to conduct its business processes. In addition to issues discussed by the Full Pre Award Working Group, NSF also was represented on each of the subgroups that fall under the Working Group including: the Grants.gov FIND and Announcement template subgroup, the Administrative Requirements subgroup, the National Policy Requirements subgroup, as well as the Title II Working Group. A more detailed description of NSF's efforts relating to the role in developing the Grants.gov FIND and Government-wide Announcement Template are located in Section C of this agency-specific report.

Post Award Working Group

Prior to this year's report submission, a staff member of the CFO chaired the Post Award Working Group. During this reporting cycle, as noted in Section C of the Federal-wide portion of the report, "the initial review of performance or progress reporting showed that, due to differences in the types of federally supported activities, performance reporting was not suited to the single-form approach taken for other types of reports. As a result, two approaches to performance reporting—one for research awards and one for other types of grants."

Given that NSF is responsible for advancing science and engineering (S&E) in the United States across a broad and expanding frontier as well as our critical role in supporting fundamental research, education and infrastructure at colleges, universities, and other institutions throughout the country, NSF has been providing substantial staff support to, as well as played an important role in, the National Science and Technology Council's

Research Business Models subcommittee that is developing a standardized reporting format for research and related awards. (Further information on this committee and NSF participation is provided below.) This standardized reporting format will allow the awarding agency, other government agencies and the public to readily identify progress highlights as well as support the development of solutions for electronically preparing and submitting such reports at some point in the future. It should be noted that as developed to date, the format is heavily modeled after the format currently used by NSF and available electronically on the NSF website.

Audit and Oversight Working Group

NSF is a participant of the subgroup tasked with the evaluation of the A-133 Compliance Supplement. An NSF staff member served as chair of the subgroup on Non-profit Organizations subject to OMB Circular A-122. This Interagency Working Group developed a 2004 Compliance Supplement that included many improvements in support of P.L. 106-107.

Grants.gov

NSF has long been recognized as a leader in electronic grants management and is a committed partner in Grants.gov activities.

The Foundation is regularly represented and plays a leadership role at the monthly Grants.gov Stakeholder and Executive Board meetings, and other Grants.gov activities. As one of eleven partner agencies, NSF executed a Memorandum of Understanding with the Program Office in the Department of Health and Human Services (HHS) that leads the Grants.gov effort. The MOU articulated NSF's agreed upon financial and staffing resources; and NSF became the first partner agency to fulfill its agreed upon financial obligation to the Grants.gov initiative.

NSF is a leading agency in the effort to define a set of Research and Related data elements and associated forms, along with NIH, DOE and others. To that end, NSF has provided necessary leadership to the Research and Related (R&R) Subcommittee after the departure of the group's longstanding chair. This leadership has been vital in development of the SF 424 (R&R) application that has been created to provide applicants a standard application form for use in submission of research and research-related proposals to the Federal government. In addition, NSF staff has been responsible (on behalf of other member agencies of the R&R subcommittee) for resolution of the day-to-day implementation issues that have surfaced in creation of the application as a Grants.gov forms package. Given the potential impact on NSF on use of a standardized research application to its programs and initiatives, NSF has contributed significant staff time to this effort. The SF 424 (R&R) is currently under review by the Office of Management and Budget (OMB).

Although NSF's staffing obligation to Grants.gov was met in FY 2003, NSF was able to permit (at the Grants.gov Program Management Office's request) last year's detailee,

Kim Deutsch, to return as Acting Deputy Program Manager part-time for three months. Ms. Deutsch served in key leadership roles at Grants.gov throughout 2003. In 2004, NSF has also detailed a staff member for three months to support Grants.gov Outreach efforts.

Prior to being detailed back to Grants.gov in May 2004, Ms. Deutsch also participated this year in the planning of the Grants.gov Applicant System to System Workshop. NSF was the only agency invited to participate in the planning sessions outside of the Grants.gov PMO. The purpose of this workshop was to give the applicant side of Grants.gov a voice and foster ideas to help the applicants with an easier transition to system-to-system submission of grant applications to Grants.gov.

Since the inception of Grants.gov, NSF has worked productively with HHS as one of 11 partner agencies whose senior executive representatives comprise the Grants.gov Executive Board. The Board was inaugurated in 2002, and chartered to provide strategic direction and executive oversight to the Grants.gov initiative, including the activities of the Program Management Office. In 2004, with concurrence from the Office of Management Budget, the Board's charter was expanded to include oversight of P.L. 106-107 activities, and membership was expanded to incorporate, on a rotating basis, executive representatives from the remaining 15 grant-making agencies.

Grants Management Line of Business (GMLOB)

As a managing partner for the Grants Management Line of Business Task Force, the National Science Foundation, along with the Department of Education, is responsible to the Office of Management and Budget for leading this major intergovernmental effort. Unprecedented in scope, the goal of the GMLOB is to develop a business driven common solution and target architecture for grants making agencies' back office processes. The resultant systems consolidation, consistent with the goals of the President's Management Agenda, will result in cost savings, while delivering enhanced customer service.

OMB launched the Lines of Business efforts in March of this year, with a target date of July 30 established for the delivery of draft business cases that would identify the common solution proposed by each task force. The total approach was for the managing agencies have overall responsibility for delivering the products and outcomes, facilitated by limited OMB/GSA-funded contractor support. These products and activities included the development of a Request for Information to industry and government that focused on getting information on current grants system capability; the analysis of the RFI responses; the development of a Common Solution White Paper using the RFI information and additional agency input; and the Draft FY06 Business Case and companion Target Architecture.

NSF and the Department of Education, as co-managing partners, were responsible for leading the 20 participating task force members in all of the activities precedent to the business case development. The methods for doing this included facilitating monthly task force meetings, supplemented by partner agency conference calls. To develop the

individual products, a number of smaller working groups of the Task Force were formed and their deliverables were then presented back to the larger group.

Concurrently, NSF and the Department of Education have continued to report three times a week to OMB/GSA on the status of activities. A significant responsibility shouldered by the partner agencies has included communication with the interagency councils: Chief Financial Officers; Chief Information Officers; Chief Acquisition Officers; and the Chief Human Capital Officers. In addition, partners have reported on progress to numerous groups across the grants recipient community.

In addition, NSF is a member of the Human Resources Line of Business Task Force (and plays a lead role in some of the working groups), and an Ex-Officio member of the Financial Management Line of Business Task Force. Each group is tasked with defining a strategy and plan for implementing a framework for end-to-end business support in their respective areas.

Federal Demonstration Partnership and National Science and Technology Council's Research Business Models Subcommittee

NSF has taken an extensive, active role in critical interagency and community streamlining and simplification activities. An example of these activities is NSF's participation in the Federal Demonstration Partnership (FDP) [www.thefdp.org]. In its fourth phase, the FDP is a cooperative initiative among 10 federal agencies and 92 institutional recipients of federal funds. Its purpose is to reduce the administrative burdens associated with research grants and contracts. The interaction between FDP's 300 or so university and federal representatives takes place in FDP's meetings three times per year, and, more extensively, in the many collaborative working groups and task forces that meet often by conference calls and by other electronic means in order to develop specific work products. The FDP is a unique forum for individuals from universities and nonprofits to work collaboratively with federal agency officials to improve the national research enterprise. At its regular meetings, FDP members hold spirited, frank discussions, identify problems, and develop action plans for change. Then these new ways of doing business are tested in the real world before putting them into effect. NSF is represented on the Executive Committee and co-chairs the Terms and Conditions Standing Committee (T&C) as well as the Membership Standing Committee. The efforts of the T&C Standing Committee have laid critical groundwork for common formats in Grants.gov. NSF is also heavily involved in the Electronic Research Administration (ERA) Standing Committee. It has used this committee in the past as an important gauge of community reaction to NSF electronic initiatives, as well as to more recent Federal-wide efforts.

NSF has also taken on leadership roles in the National Science and Technology Council's Committee on Science's new activity: a subcommittee examining opportunities for improvement of Research Business Models [rbm.nih.gov]. In addition to providing staff support for the Subcommittee, NSF co-chairs two of the three working groups. One key project, an initiative to expand the FDP Model Terms and Conditions, and thus add to

consistency for research funding recipients, also is led by an NSF staff member. Finally, NSF staff also has served on the cost issues working group as well as the subcommittee dedicated toward development of a standardized progress report format for use in reporting progress on research and related awards. Further details on this initiative are provided in the Post Award Working Group section above.

B. Internal Efforts to Create an Environment Conducive to Grants Streamlining and Simplification and Assess Impact of Changes

General Approach

NSF senior management continues to demonstrate active support for P.L. 106-107, and all related government-wide improvements to grants administration. In addition to providing senior executive representation to the Grants.gov Executive Board, NSF has:

- continued to provide leadership to various P.L. 106-107 working groups;
- provided additional resources, both staff and funding, in support of the overall Grants.gov enterprise; and
- assumed a leadership role, as a co-managing partner of the Grants Management Line of Business task force, that is pursuing a business driven, common solution for agencies' back office grants administration activities.

In addition, NSF senior management have been briefed on multiple occasions on Grants.gov, GMLOB, NSTC RBM, and other streamlining efforts and are fully supportive of these activities.

Internal Outreach

NSF continues to conduct extensive outreach to internal stakeholders and staff on grants streamlining and simplification. This includes regular briefings for NSF programs and grant staff, agency IT specialists, and the NSF Electronic Business Integrators Team (EBIT). EBIT is composed of representatives from each NSF Directorate and was established to provide assistance in setting priorities for, and implementing and facilitating communication about NSF electronic business systems. Internal websites are actively used to communicate information about changes in NSF's policies and procedures as well as new developments in IT systems, and NSF staff is notified of key initiatives through electronic mail, bulletins, staff memoranda and other alerts.

The Foundation has established the NSF Academy, whose missions include integrating formal IT training with the agency's complete curriculum, and conducting workshops and formal training on NSF's E-Business systems. The Academy offers a wide variety of Web-based E-Learning, tutorials, and classroom training courses on E-Business topics such as proposal processing, reviewer setup, panel arrangements, and post-award proposal processing.

External Outreach

NSF conducts extensive external outreach, including regional workshops throughout the nation, to principal investigators and officials of sponsored projects offices and business offices on grants processes, the electronic systems that are currently in place to support them, and new initiatives such as Grants.gov. These workshops are designed to assist these individuals – and their organizations – as they prepare to submit proposals for Federal funding. For more than ten years, NSF has conducted over 20 of these regional workshops, reaching an audience of several thousand research administrators and principal investigators. Effective outreach for our academic and other awardees is and will continue to be a high priority for NSF.

The Federal Demonstration Partnership plays a vital role in representing the community of research institutions and works with its Federal agency members to build consensus on interoperable grant processes, data standards and management. Representatives from the Grants.gov program management office regularly attend FDP meetings to provide status updates on related activities. These meetings then provide significant opportunities for the institutional and Federal agency participants to engage in a discussion of the impact of proposed activities on the research and education enterprise.

- Finally, NSF regularly participates in conferences conducted by professional societies such as the National Council of University Research Administrators (NCURA) and the Society of Research Administrators (SRA). These events are excellent venues for discussing upcoming or pending streamlining initiatives, as well for soliciting input and obtaining reactions to how well such changes will be received by our customer communities.

Agency-wide efforts to implement and track progress of streamlining initiatives

NSF's Electronic Business Integrators Team recommends electronic business process improvements and tracks the progress of streamlining initiatives. EBIT has subgroups that focus on specific areas (e.g., business process improvement, specific applications and functions, training, reporting, customer care, new services such as desktop videoconferencing, etc.), as well as larger groups that ensure that streamlined processes are effectively integrated and work well together. NSF's Division of Information Systems (DIS) coordinates the Requirements Review Board, composed of voting representatives from each NSF Directorate, which recommends improvements to NSF's proposal processing systems and helps prioritize these recommendations. In addition, NSF's Division of Administrative Services (DAS) coordinates the NSF Webmasters and Coordinating Webmasters groups to ensure that agency webmasters are kept informed on new procedures and technical standards.

Internal efforts to assess the potential for additional streamlining consistent with government-wide initiatives

Just as NSF seeks to fund research at the frontiers of knowledge, the Foundation also strives to be on the leading edge of grants administration and management practices. Since passage of the NSF Act in 1950, NSF has a long tradition of examining (and reexamining) our own internal processes to discover new and better ways to efficiently and effectively complete our mission of promoting the progress of science and advancing the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering. For example, NSF was the first Federal agency to explore accomplishing its proposal and award administration functions via electronic means. From the inception of the FastLane system in the early 1990's our purpose has been, and continues to be, to experiment with ways to use the World-Wide-Web to facilitate business transactions and exchange information between the Foundation and our client community including researchers, reviewers, research administrators, and others doing business with NSF. Streamlining and simplification efforts are at the core of how we function as an agency and we intend to continue our legacy of being on the forefront of these efforts in the future.

Activities to assess the impact of streamlining

To better prepare for the future, NSF is conducting a comprehensive Business Analysis (covering management of business processes, human capital and IT), that will highlight additional areas where processes can be streamlined and simplified. The Business Analysis, being conducted by Booz Allen Hamilton, is a key initiative for NSF, and senior management have effectively promoted its importance and ensured the full involvement of NSF staff. The NSF Director issued Office of the Director Staff Memorandum 02-14, *NSF Administration and Management Strategic Plan and Business Analysis*, on October 30, 2002, to emphasize the significance of this effort to the agency's future operations.

C. Implementing the Recent Changes Affecting the Pre-Award Process

Grants.gov FIND

As indicated in last year's submission, NSF participated in the subgroup (of the Pre Award Working Group) that developed the Grants.gov FIND data elements for consideration by the full Working Group, rectifying comments received from publication of the proposed elements in the Federal Register, and in helping to develop the draft Policy Guidance for consideration by OMB. While these efforts involved a significant investment of staff resources, we believe it was worthwhile given the importance – and ultimate impact – of this important new Government resource.

Since its inception, NSF also has participated in the Grants.gov FIND pilot from an electronic transmission perspective, providing sample data and helping to further refine, from a data submission standpoint, the data fields that will be represented in the

electronic synopsis. NSF's Program Information Management System (PIMS) has been designed to fully support NSF's participation in Grants.gov FIND, and includes an application that exports cleared NSF funding opportunity synopses to Grants.gov through a system-to-system interface. NSF is submitting 100% of new funding opportunities as they are cleared internally through PIMS. NSF was one of the first agencies to begin posting opportunities on FIND in February 2003. As of July 26, 2004, NSF has posted 346 opportunities of which 186 are currently active. Of the 26 grants making agencies, this is the highest number of submissions to Grants.gov of any agency besides the Department of Health and Human Services.

NSF customers, however, have expressed some confusion regarding funding opportunity listings that do not have a separate program announcement or solicitation. Furthermore, there was substantial confusion about NSF ongoing programs that take unsolicited proposals when they were added to Grants.gov. Apparently, subscribers to Grants.gov were under the impression these were new NSF funding opportunities, rather than ones that were newly available on Grants.gov. NSF will continue to work with Grants.gov over the next year to address these issues and ensure that customers fully understand the full complement of opportunities available for submission of proposals to the Foundation.

Announcement Template

NSF has been at the forefront of Federal agencies in developing an electronic template system for use in development of funding opportunities. Beginning in January 2000, NSF deployed its Program Announcement Template (PAT) system. This system was a standardized electronic template for use in development of NSF funding opportunities. This template was used as a starting point in discussions by the Federal Demonstration Partnership whose goal was to develop a model that could be used by Federal research funding organizations in preparation of funding opportunities. It was this model that was used by the Pre Award Working Group as the starting point for development of the Federal-wide announcement template.

The PAT system continued to be developed and enhanced through October 2002, when NSF introduced the Program Information Management System (PIMS) as its replacement. PIMS represents a major leap in capability for NSF program staff in planning and developing their funding opportunity documents and includes robust tools for workgroup review and approval, revision, clearance, and dissemination. NSF began requiring use of PIMS for all NSF funding opportunities in FY 2003.

PIMS enables synchronization among the various places where NSF funding opportunities are published, ensuring that information about a given opportunity is the same no matter where the information is published: on the central NSF web site in our Online Document System (ODS), on individual Directorate web sites, and on Grants.gov FIND. With PIMS, NSF is moving from a document-based system for managing our funding opportunities to a databased system that relies on a single, comprehensive data store of information.

As previously discussed, PIMS was specifically designed to streamline the process of preparing, reviewing, clearing, and publishing NSF funding opportunities. It enables browser-based workflow for all of these processes and has been very successful in reducing the time required to prepare, review, clear, and publish NSF funding opportunities. Furthermore, PIMS enforces rules on formatting and business processes that improve our service to the research community and our ability to interface successfully with Federal initiatives such as Grants.gov FIND and the mandated OMB announcement format. Given this centralized approach to clearance and development of the PIMS system, it was not necessary to issue Foundation-wide guidance to NSF program staff regarding the Announcement template. And, as indicated above, since NSF's format served as the initial discussion point for development of the Federal-wide announcement template, only minor changes were necessary to make NSF fully compliant with this new standard.

The Grants.gov Portal for Electronic Applications

NSF hired a contracting team in early October 2003 before the official launch of Grants.gov to assist the agency in adapting our current system to accept applications from Grants.gov. The most critical tasks are listed below:

- Evaluating the data requirements specified in the R&R dataset to determine the specific data requirements that are not currently covered and yet still required by NSF;
- Drafting agency specific forms for the collection of the NSF-specific data;
- Constructing a Grants.gov Proposal Interface to electronically retrieve NSF applications using web services provided by Grants.gov; and
- Inserting the retrieved applications into the FastLane system [www.fastlane.nsf.gov] so that NSF program officers will then manage and process the applications as they would an application received via FastLane.

The first two tasks are complete and the forms were submitted to Grants.gov for development in early April 2004. The forms will be ready at the same time as the SF 424 (R&R), allowing NSF to be one of the first agencies to use this important cross-agency application.

The last two tasks will be completed by Fall 2004 thereby allowing NSF to start accepting applications through Grants.gov at that time (contingent upon OMB approval of the Research and Related (R&R) forms.) NSF initially plans to start with acceptance of unsolicited proposals without target dates, expanding to additional programs, and increasing the number of proposals submitted via Grants.gov as the process is used and issues are resolved.

While there are no NSF programs available for use by potential applicants in Grants.gov APPLY at this time, we anticipate that twenty programs will be made available in Grants.gov APPLY in fiscal year 2005. As a result, NSF will start accepting applications through Grants.gov by fall 2004 depending upon OMB approval of the R&R forms.

NSF has been very active in preparing the research community on the Grants.gov system and the new requirements of using the DUNS number and Central Contractor Registry. (It should be noted that NSF's proposal preparation requirements have included submission of the DUNS number since October 1997 in anticipation of implementation of a Federal-wide requirement, thereby minimizing the burden on our proposer community.) Topics of this nature are highlighted in NSF's extensive outreach efforts including regional workshops throughout the nation, to principal investigators and officials of sponsored projects offices and business offices and to the Federal Demonstration Partnership.

At this time, the most significant barrier to NSF's inclusion of programs in Grants.gov is the pending OMB approval of the R&R forms. If these forms cannot be used as part of NSF's application package, then NSF will have to design its own forms and wait for the Grants.gov Forms Factory to develop them. This process could delay NSF several months in using the APPLY component of Grants.gov.

In addition, NSF has been working closely with Grants.gov to identify other issues that impact NSF-wide use of the Grants.gov APPLY function, as well as resolve other issues identified by the Federal Demonstration Partnership, other customers, and NSF in use of Grants.gov for all NSF programs.

Other

The extensive experience that NSF has with electronic grants and electronic business is being leveraged in the development and implementation of Grants.gov. (It should be noted, however, that NSF has received proposals electronically since 1995; in FY 2001, the Foundation began requiring the electronic submission of proposals; and since 1995 over 200,000 proposals have been submitted via FastLane and received electronically by NSF.) NSF has contributed staff resources to assist with Grants.gov technology evaluations, technical panels, steering committees, stakeholder committees, and working groups. Furthermore, key NSF staff members have been on detail to Grants.gov in 2004. (Further information on this is provided in Section A. above.)

NSF currently receives all proposals electronically via the NSF FastLane (www.fastlane.nsf.gov) system. In FY 04, over 43,000 proposals will be submitted electronically via FastLane. In addition, in FY 04, the following types of transactions also will be submitted electronically via FastLane:

- over 190,000 Reviews;
- over 25,000 Grantee Project Reports;
- over 10,000 Post Award Notification and Requests;
- over 4,000 Requests for Supplemental Funding;
- over 9,000 Graduate Research Fellowship Applications;
- over 30,000 Graduate Research Fellowship Reference Reports; and
- over 15,000 Cash Requests.

Furthermore, FastLane supports the electronic submission of Postdoctoral Fellowship Applications and Reference Reports, Revised Proposal Budgets, and Quarterly Federal Cash Transaction Requests. FastLane has an easy-to-use interface that permits users to track the status of their proposals and continuing grant increments, and a state-of-the-art collaborative system used to facilitate the conduct of panel review meetings.

NSF is continuing to evolve FastLane to seamlessly integrate with Grants.gov. NSF will begin to receive proposals submitted through Grants.gov in Fall 2004 as described in Section B above.

In June of 2002, NSF released the eJacket System, a path-finding effort for NSF's back office grants management functions. The eJacket includes functions such as role-based electronic workflow routing, processing, approval, and storage. This innovative system uses a data-driven mechanism that receives FastLane submissions (both pre-award and post-award) and displays the information in the "My Work" area of the cognizant NSF official. It then notifies the official that a proposal has been received or an action must be taken. The official also can route the action to other NSF staff, forward to another program, or share responsibilities with peers.

The eJacket moves NSF towards full implementation of the Government Paperwork Elimination Act (GPEA) working in tandem with FastLane and Grants.gov to allow customers and internal staff the capability to submit and process grants without the use of paper. eJacket significantly reduces the need for hard copy documents by maintaining proposal and award records electronically and allowing the electronic signing of official documents by staff.

While reducing the reliance on paper, the eJacket is a major step toward streamlining the grants management process by reducing the "hand-off" from one staff member to another, and the physical transportation of paper jackets. Once an action has been taken, the proposal is automatically taken to the next process without human intervention. This significantly reduces the time to award decision. Also, as all proposal and award data is available electronically, the risk of lost or misplaced documents is reduced.